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EXAMINER	
THOMPSON, JAMES A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/759,234	OKA ET AL.	
	Examiner	Art Unit	
	JAMES A. THOMPSON	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 17-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 17-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 March 2008 has been entered.

Response to Arguments

2. Applicant's arguments filed 18 March 2008 have been fully considered but they are not persuasive. Examiner agrees with Applicant that the presently amended independent claims are not taught by the combination of references set forth in the previous office action, mailed 11 September 2007. However, additional prior art has been discovered which renders the present claims obvious to one of ordinary skill in the art at the time of the invention. Accordingly, new prior art rejections are set forth below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3, 17, 21-22, 26, 34, 36/1-36/3, 36/16-36/17, 36/21-36/22, 36/26, 36/34, 37/1-37/3, 37/16-37/17, 37/21-37/22, 37/26, 37/34, 38/1-38/3, 38/16-38/17, 38/21-38/22, 38/26 and 38/34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristy (US Patent 5,218,455) in view of Quinion (US Patent 5,978,559) and Yagi (US Patent 6,393,206 B1).

Regarding claims 1 and 34: Kristy discloses a scanning step to transmit a plurality of digital images corresponding to a separate customer order (column 4, lines 50-57 of Kristy) over a first data path (figure(12→14) of Kristy) from a scanner (figure(12) of Kristy) to the computer processor (column 3, lines 10-24 of Kristy), wherein the first data path includes one or more first high-speed image data

interface buses (column 3, lines 20-28 of Kristy). In order for the digital data to reach the dedicated computer, a first image data interface bus is inherent since there must be some form of digital data bus by which the digital data can be transmitted from the scanner to the dedicated computer. Since the image data being transferred is high resolution image data (column 3, lines 25-28 of Kristy), the first image data interface bus can be considered a first high-speed image data interface bus, since transferring high resolution image data requires the transfer of a high level of digital image data.

Kristy further discloses a processing step to process the plurality of digital images by the computer processor (column 3, lines 62-67 of Kristy) and to combine the processed plurality of digital images into a record image (column 3, line 68 to column 4, line 5 of Kristy). The record image is the conglomeration of digital images that are stored as a record on a storage medium, and can therefore be selected and displayed rapidly (column 3, line 68 to column 4, line 5 of Kristy).

Kristy further discloses, in the second embodiment, that the processing step includes: displaying a user interface that allows a user to select images from the plurality of digital images; displaying a user interface that allows a user to adjust the selected images; and combining the adjusted images into the record image (column 5, lines 29-40 of Kristy – *user selects, adjusts, and outputs images as the set of images to be recorded*).

Kristy further discloses a writing step to transmit the record image to an image-recorder for recording onto a medium (figure(18) and column 3, lines 62-68 of Kristy), wherein the image-recorder is connected to the dedicated computer (column 4, lines 11-14 of Kristy) and the record image is passed from the dedicated computer to the image-recorder (column 4, lines 11-14 of Kristy) at a constant rate. As is well-known in the art, a compact disc recorder (figure(18) of Kristy) records digital data at a constant rate, wherein said digital data is passed to said compact disc recorder by a computer. Since the multi-resolution digital imagery photofinishing system taught by Kristy is clearly meant for multiple uses, then it is inherent that the scanning step is repeated to transmit a new plurality of digital images corresponding to a new customer order (column 4, lines 50-54 of Kristy) over the first data path (column 3, lines 10-17 of Kristy) into a new plurality of digital images (column 3, lines 20-24 of Kristy).

Kristy further discloses separately processing job files corresponding to customer orders (column 4, lines 50-54 of Kristy) and record images (column 3, line 62 to column 4, line 5 of Kristy).

While the displaying steps and combining step included as part of the processing step are from the second embodiment of Kristy, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the first embodiment of Kristy so as to include a user interface whereby the scanned digital images can be edited before output. In the first embodiment of Kristy, output corresponds

to writing to the CD recorder. Said modification would have been obvious at the time of the present invention since improvements in computer and digital image scanning technology would permit an ordinary user to scan and edit high resolution images. Further, even at the time of the filing of Kristy, such a modification would be obvious, and would allow the photo lab technician the ability to edit the processed photos before recording onto the CD. Thus, certain obvious problems, such as the need for gamma correction and color balancing, could be corrected digitally before writing the image data onto the CD.

Kristy does not disclose expressly that said image-recorder is connected to the dedicated computer by a second path which includes one or more second high-speed image data interface buses separate from each of the one or more first high-speed image data interface buses; that the scanning step is repeated prior to completion of the writing step, such that transfer of the new plurality of digital images over the first data path and transfer of the record image over the second data path occur simultaneously over separate paths; and that a queue for job files corresponding to customer orders, a queue for record images, and a queue for print files are each continuously polled in parallel.

Quinion discloses an image-recorder (figure 5(12-1) of Quinion) that is connected to a dedicated computer (figure 5(25) of Quinion) by a second path which includes one or more second high-speed image data interface buses (figure 5 of Quinion – *arrows from server [25] to digital printer [12-1]*) separate from each of one or more first high-speed image data interface buses (figure 5 and column 6, lines 23-32 of Quinion – *arrows from other servers [25] to other digital printers [12-2...12-N]*); and separate queues for different types of data, including print files (figure 5(58,60,62) and column 8, lines 8-19 of Quinion), that are each continuously polled in parallel (column 10, lines 1-12 of Quinion).

Kristy and Quinion are combinable because they are from the same field of endeavor, namely the control and efficient processing and outputting of digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use separate paths for processing the digital image data and related data, and separate queues for the different types of data, which would thus include a queue for job files corresponding to customer orders (as taught by Kristy), a queue for record images (as taught by Kristy), and a queue for print files (as taught by Quinion). The motivation for doing so would have been to more quickly and efficiently process and output the digital image data. Continuously polling the queues in parallel, as taught by Quinion, would have the advantage of being able to more efficiently and effectively process all the data based on a continuously updated status. Therefore, it would have been obvious to combine Quinion with Kristy.

Kristy in view of Quinion does not disclose expressly that the scanning step is repeated prior to completion of the writing step, such that transfer of the new plurality of digital images over the first data path and transfer of the record image over the second data path occur simultaneously over separate paths.

Yagi discloses that inputting a plurality of images (column 17, lines 26-29 of Yagi) is repeated prior to completion of a writing step (column 20, lines 23-33 of Yagi), such that transfer of the new plurality of digital images over the first data path and transfer of the record image over the second data path occur simultaneously over separate paths (column 20, lines 23-33 of Yagi).

Kristy in view of Quinion is combinable with Yagi because they are from the same field of endeavor, namely digital image data copying and authoring. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the digital image reading and digital image writing in parallel, so that the writing of the data is being performed while data is being read. Instead of the input device being the receiver, as taught by Yagi, the input device would be the scanner taught by Kristy. The motivation for doing so would have been to allow optical disk data recording to be as easy as duplication performed on magnetic tape media (column 1, lines 60-65 of Yagi). Therefore, it would have been obvious to combine Yagi with Kristy in view of Quinion to obtain the invention as specified in claims 1 and 34.

Regarding claim 2: Since the multi-resolution digital imagery photofinishing system taught by Kristy is clearly meant for multiple uses, then it is inherent that the processing step is repeated to process the new plurality of digital images (column 3, lines 62-67 of Kristy) and to combine the processed new plurality of digital images into a new record image (column 3, line 68 to column 4, line 5 of Kristy).

Regarding claim 3: Since the multi-resolution digital imagery photofinishing system taught by Kristy is clearly meant for multiple uses, then it is inherent that the writing step is repeated to transmit the new record image to a new medium by the image-recorder (figure(18) and column 3, lines 62-68 of Kristy). The writing step for the new medium image must be initiated after completion of the writing step for the previous record image since it is not possible for two writing steps to be performed at the same time when there is one image recorder.

Regarding claim 17: Kristy discloses that the adjustment includes cropping (column 5, lines 29-32 of Kristy).

Regarding claim 21: Kristy discloses that the adjustment includes a color adjustment (column 5, lines 29-33 of Kristy).

Regarding claim 22: Kristy discloses that the adjustment includes image editing (column 5, lines 29-33 of Kristy). Addition of text, zooming, cropping, and tone and color corrections (column 5, lines 29-33 of Kristy) are all forms of image editing.

Regarding claim 26: Kristy discloses that the medium is a CD-ROM (figure(20) and column 3, lines 62-68 of Kristy).

Regarding claims 36/1-36/3, 36/16-36/17, 36/21-36/22, 36/26, 36/34, 37/1-37/3, 37/16-37/17, 37/21-37/22, 37/26, 37/34, 38/1-38/3, 38/16-38/17, 38/21-38/22, 38/26 and 38/34: Kristy discloses performing all of the processing steps with a host computer (figure(14); column 3, lines 1-3 and lines 25-28; and column 4, lines 2-5 and lines 62-65 of Kristy), which would therefore include the computer-executable process steps stored on a computer-readable medium, wherein said process steps are executed with a processor, since this is the manner in which digital computers operate.

5. Claims 4-6, 27, 29-33, 36/4-36/6, 36/27, 36/29-36/33, 37/4-37/6, 37/27, 37/29-37/33, 38/4-38/6, 38/27 and 38/29-38/33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristy (US Patent 5,218,455) in view of Quinion (US Patent 5,978,559), Yagi (US Patent 6,393,206 B1), and Koakutsu (US Patent 6,031,976).

Regarding claim 4: Kristy in view of Quinion and Yagi does not disclose expressly that each record image is stored in an image-queue prior to being transmitted to each respective medium by the writing step.

Koakutsu discloses that each record image is stored in an image-queue (storage unit) (figure 1(7) and column 4, lines 13-16 of Koakutsu) prior to being transmitted to each respective medium by the writing step (column 4, lines 15-18 of Koakutsu).

Kristy in view of Quinion and Yagi is combinable with Koakutsu because they are from the similar problem solving areas, namely digital data processing and control. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to store the print data in an image queue before the data is transmitted, as taught by Koakutsu. The motivation for doing so would have been to increase printer throughput and decrease processor burden (column 3, lines 8-11 of Koakutsu). Therefore, it would have been obvious to combine Koakutsu with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 4.

Further regarding claim 5: Koakutsu discloses that the writing step includes the step of obtaining, from image-queue (storage unit), the record image to be transmitted to the medium (column 4, lines 15-18 of Koakutsu).

Further regarding claim 6: Koakutsu discloses that the image queue can be represented by thread instructions (column 5, lines 25-30 of Koakutsu) which are stored on a computer-readable storage medium (column 5, lines 31-33 of Koakutsu), and must therefore be stored as a file. The thread instruction files stored on the computer-readable storage medium provide instructions to the CPU that allow the CPU to properly carry out print operations on the image data (column 5, lines 25-33 of Koakutsu), so said files therefore represent the image-queue.

Regarding claim 27: Kristy in view of Quinion and Yagi does not disclose expressly that the medium is a DVD.

Koakutsu discloses storing digital data on any type of disk media including optical disks (column 5, lines 38-43 of Koakutsu), of which a DVD is a well-known type.

Kristy in view of Quinion and Yagi is combinable with Koakutsu because they are from similar problem solving areas, namely digital data processing and control. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to write the record image, as taught by Kristy, to a DVD. The motivation for doing so would have been that a DVD is one of many types of storage media that can store digital data (column 5, lines 43-46 of Koakutsu). Therefore, it would have been obvious to combine Koakutsu with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 27.

Regarding claim 29: Kristy in view of Quinion and Yagi does not disclose expressly that the medium is a diskette.

Koakutsu discloses storing digital data on a diskette (column 5, lines 38-41 of Koakutsu).

Kristy in view of Quinion and Yagi is combinable with Koakutsu are combinable because they are from similar problem solving areas, namely digital data processing and control. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to write the record image, as taught by Kristy, to a diskette. The motivation for doing so would have been that a diskette is one of many types of storage media that can store digital data (column 5, lines 43-46 of Koakutsu). Therefore, it would have been obvious to combine Koakutsu with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 29.

Regarding claim 30: Kristy in view of Quinion and Yagi does not disclose expressly that the medium is a digital mini-disc.

Koakutsu discloses storing digital data on any type of disk media including optical disks (column 5, lines 38-43 of Koakutsu), of which a digital mini-disc is a well-known type.

Kristy in view of Quinion and Yagi is combinable with Koakutsu because they are from similar problem solving areas, namely digital data processing and control. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to write the record image, as taught by Kristy, to a digital mini-disc. The motivation for doing so would have been that a digital mini-disc is one of many types of storage media that can store digital data (column 5, lines 43-46 of Koakutsu). Therefore, it would have been obvious to combine Koakutsu with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 30.

Regarding claim 31: Kristy in view of Quinion and Yagi does not disclose expressly that the medium is a memory card.

Koakutsu discloses storing digital data on an EPROM, EEPROM or Flash EEPROM (column 5, lines 43-46 of Koakutsu), all of which are types of memory cards.

Kristy in view of Quinion and Yagi is combinable with Koakutsu because they are from similar problem solving areas, namely digital data processing and control. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to write the record image, as taught by Kristy, to an EPROM, EEPROM or Flash EEPROM. The motivation for doing so would have been that EPROMs, EEPROMs and Flash EEPROMs are some of many types of storage media that can store digital data (column 5, lines 43-46 of Koakutsu). Therefore, it would have been obvious to combine Koakutsu with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 31.

Regarding claim 32: Kristy in view of Quinion and Yagi does not disclose expressly that the medium is a memory chip.

Koakutsu discloses storing digital data in ROM or RAM (column 5, lines 43-46 of Koakutsu), both of which are types of memory chips.

Kristy in view of Quinion and Yagi is combinable with Koakutsu because they are from similar problem solving areas, namely digital data processing and control. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to write the record image, as taught by Kristy, in ROM or RAM. The motivation for doing so would have been that ROM and RAM are two of many types of storage media that can store digital data (column 5, lines 43-46 of Koakutsu). Therefore, it would have been obvious to combine Koakutsu with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 32.

Regarding claim 33: Kristy in view of Quinion and Yagi does not disclose expressly that the medium is a memory storage device.

Koakutsu discloses storing digital data in many different types of memory storage devices (column 5, lines 40-46 of Koakutsu).

Kristy in view of Quinion and Yagi is combinable with Koakutsu because they are from similar problem solving areas, namely digital data processing and control. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to write the record image, as taught by Kristy, into a memory storage device. The motivation for doing so would have been that memory storage devices can store digital data (column 5, lines 43-46 of Koakutsu), which can then be accessed later. Therefore, it would have been obvious to combine Koakutsu with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 33.

Regarding claims 36/4-36/6, 36/27, 36/29-36/33, 37/4-37/6, 37/27, 37/29-37/33, 38/4-38/6, 38/27 and 38/29-38/33: Kristy discloses performing all of the processing steps with a host computer (figure(14); column 3, lines 1-3 and lines 25-28; and column 4, lines 2-5 and lines 62-65 of Kristy), which would therefore include the computer-executable process steps stored on a computer-readable medium, wherein said process steps are executed with a processor, since this is the manner in which digital computers operate.

6. Claims 7, 35, 36/7, 36/35, 37/7, 37/35, 38/7 and 38/35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristy (US Patent 5,218,455) in view of Quinion (US Patent 5,978,559), Yagi (US Patent 6,393,206 B1), and Manico (US Patent 5,764,870).

Regarding claim 7: Kristy in view of Quinion and Yagi does not disclose expressly generating a print index file containing a thumbnail representation of each of the plurality of digital images and sending the print index file to a printer to print a corresponding print index.

Manico discloses generating a print index file containing a thumbnail representation of each of the plurality of digital images (figure 9a and column 4, lines 60-65 of Manico) and sending the print index file to a printer to print a corresponding print index (column 3, lines 24-25 of Manico).

Kristy in view of Quinion and Yagi is combinable with Manico because they are from the same field of endeavor, namely the control and processing of digital data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to further generate and print a print index file containing thumbnail representations of each image, as taught by Manico. The motivation for doing so would have been to be able to quickly locate and call up a desired image from a plurality of images (column 1, lines 10-12 of Manico and column 3, line 62 to column 4, line 2 of Kristy). Therefore, it

would have been obvious to combine Manico with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 7.

Regarding claim 35: Kristy discloses a scanning step to transmit a plurality of digital images corresponding to a separate customer order (column 4, lines 50-57 of Kristy) over a first data path (figure(12→14) of Kristy) from a scanner (figure(12) of Kristy) to the computer processor (column 3, lines 10-24 of Kristy), wherein the first data path includes one or more first high-speed image data interface buses (column 3, lines 20-28 of Kristy). In order for the digital data to reach the dedicated computer, a first image data interface bus is inherent since there must be some form of digital data bus by which the digital data can be transmitted from the scanner to the dedicated computer. Since the image data being transferred is high resolution image data (column 3, lines 25-28 of Kristy), the first image data interface bus can be considered a first high-speed image data interface bus, since transferring high resolution image data requires the transfer of a high level of digital image data.

Kristy further discloses an adjusting step to adjust each of the plurality of digital images which were scanned in from the scanner (column 5, lines 26-31 of Kristy).

Kristy further discloses a processing step to process the plurality of digital images (column 3, lines 62-67 of Kristy) and to combine the processed plurality of digital images into a CD-ROM ("optical compact disc") image (column 3, line 68 to column 4, line 5 of Kristy). The CD-ROM image is the conglomeration of digital images that are stored as a record on a storage medium, and can therefore be selected and displayed rapidly (column 3, line 68 to column 4, line 5 of Kristy).

Kristy further discloses, in the second embodiment, that the adjusting step includes: displaying a user interface that allows a user to select images from the plurality of digital images; and displaying a user interface that allows a user to adjust the selected images (column 5, lines 29-40 of Kristy – *user selects, adjusts, and outputs images as the set of images to be recorded*); and that the processing step includes: combining the adjusted images into the record image (column 5, lines 29-40 of Kristy – *user selects, adjusts, and outputs images as the set of images to be recorded*).

Kristy further discloses a CD-writing step to transmit the CD-ROM image to a CD-recorder for recording onto a CD-ROM (figure(18) and column 3, lines 62-68 of Kristy).

Kristy further discloses separately processing job files corresponding to customer orders (column 4, lines 50-54 of Kristy) and CD-ROM images (column 3, line 62 to column 4, line 5 of Kristy).

Since the multi-resolution digital imagery photofinishing system taught by Kristy is clearly meant for multiple uses, then it is inherent that the scanning step is repeated to scan a new plurality of digital images corresponding to a new customer order (column 4, lines 50-54 of Kristy) from the scanner

(column 3, lines 10-17 of Kristy) into a new plurality of digital images (column 3, lines 20-24 of Kristy), the processing step is repeated to process the new plurality of digital images (column 3, lines 62-67 of Kristy) and to combine the processed new plurality of digital images into a new CD-ROM image (column 3, line 68 to column 4, line 5 of Kristy), and the CD-writing step is repeated to transmit the new CD-ROM image to a new CD-ROM placed in the CD-recorder (figure(18) and column 3, lines 62-68 of Kristy). The CD-writing step must be repeated after completion of the CD-writing step for the previous CD-ROM image since it is not possible for two CD-writing steps to be performed at the same time when there is one CD-writer.

While the display steps included as part of the adjusting step, and the combining step included as part of the processing step, are from the second embodiment of Kristy, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the first embodiment of Kristy so as to include a user interface whereby the scanned digital images can be edited before output. In the first embodiment of Kristy, output corresponds to writing to the CD recorder. Said modification would have been obvious at the time of the present invention since improvements in computer and digital image scanning technology would permit an ordinary user to scan and edit high resolution images. Further, even at the time of the filing of Kristy, such a modification would be obvious, and would allow the photo lab technician the ability to edit the processed photos before recording onto the CD. Thus, certain obvious problems, such as the need for gamma correction and color balancing, could be corrected digitally before writing the image data onto the CD.

Kristy does not disclose expressly a generating step to generate a print index file containing a thumbnail representation of each of the adjusted plurality of digital images, the print index file for printing by a printer; that said CD-ROM image is transmitted over a second data path from said computer processor, wherein the second data path includes one or more second high-speed image data interface buses, wherein each of the one or more second high-speed image data interface buses is separate from each of the one or more first high speed image data interface buses; that the scanning step is repeated prior to completion of the writing step, such that transfer of the new plurality of digital images over the first high-speed image data interface bus and transfer of the record image over the second high-speed image data interface bus occur simultaneously over separate paths; and that a queue for job files corresponding to customer orders, a queue for record images, and a queue for print files are each continuously polled in parallel.

Quinion discloses a computer processor (figure 5(25) of Quinion) that transmits an image over a second data path, wherein the second data path includes one or more second high-speed image data

interface buses (figure 5 of Quinion – *arrows from server [25] to digital printer [12-1]*), wherein each of the one or more second high-speed image data interface buses is separate from each of the one or more first high speed image data interface buses (figure 5 and column 6, lines 23-32 of Quinion – *arrows from other servers [25] to other digital printers [12-2...12-N]*); and separate queues for different types of data, including print files (figure 5(58,60,62) and column 8, lines 8-19 of Quinion), that are each continuously polled in parallel (column 10, lines 1-12 of Quinion).

Kristy and Quinion are combinable because they are from the same field of endeavor, namely the control and efficient processing and outputting of digital image data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use separate paths for processing the digital image data (CD-ROM image *as per* the teachings of Kristy) and related data, and separate queues for the different types of data, which would thus include a queue for job files corresponding to customer orders (as taught by Kristy), a queue for record images (as taught by Kristy), and a queue for print files (as taught by Quinion). The motivation for doing so would have been to more quickly and efficiently process and output the digital image data. Continuously polling the queues in parallel, as taught by Quinion, would have the advantage of being able to more efficiently and effectively process all the data based on a continuously updated status. Therefore, it would have been obvious to combine Quinion with Kristy.

Kristy in view of Quinion does not disclose expressly a generating step to generate a print index file containing a thumbnail representation of each of the adjusted plurality of digital images, the print index file for printing by a printer; and that the scanning step is repeated prior to completion of the writing step, such that transfer of the new plurality of digital images over the first high-speed image data interface bus and transfer of the record image over the second high-speed image data interface bus occur simultaneously over separate paths.

Yagi discloses that inputting a plurality of images (column 17, lines 26-29 of Yagi) is repeated prior to completion of a writing step (column 20, lines 23-33 of Yagi), such that transfer of the new plurality of digital images over the first data path and transfer of the record image over the second data path occur simultaneously over separate paths (column 20, lines 23-33 of Yagi).

Kristy in view of Quinion is combinable with Yagi because they are from the same field of endeavor, namely digital image data copying and authoring. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the digital image reading and digital image writing in parallel, so that the writing of the data is being performed while data is being read. Instead of the input device being the receiver, as taught by Yagi, the input device would be the scanner taught by

Kristy. The motivation for doing so would have been to allow optical disk data recording to be as easy as duplication performed on magnetic tape media (column 1, lines 60-65 of Yagi). Therefore, it would have been obvious to combine Yagi with Kristy in view of Quinion.

Kristy in view of Quinion and Yagi does not disclose expressly a generating step to generate a print index file containing a thumbnail representation of each of the adjusted plurality of digital images, the print index file for printing by a printer.

Manico discloses a generating step to generate a print index file containing a thumbnail representation of each of the adjusted plurality of digital images (figure 9a and column 4, lines 60-65 of Manico), the print index file for printing by a printer (column 3, lines 24-25 of Manico).

Kristy in view of Quinion and Yagi is combinable with Manico because they are from the same field of endeavor, namely the control and processing of digital data. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to further generate a print index file containing thumbnail representations of each image, as taught by Manico. The motivation for doing so would have been to be able to quickly locate and call up a desired image from a plurality of images (column 1, lines 10-12 of Manico and column 3, line 62 to column 4, line 2 of Kristy). Therefore, it would have been obvious to combine Manico with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 35.

Regarding claims 36/7, 36/35, 37/7, 37/35, 38/7 and 38/35: Kristy discloses performing all of the processing steps with a host computer (figure(14); column 3, lines 1-3 and lines 25-28; and column 4, lines 2-5 and lines 62-65 of Kristy), which would therefore include the computer-executable process steps stored on a computer-readable medium, wherein said process steps are executed with a processor, since this is the manner in which digital computers operate.

7. Claims 8-10, 36/8-36/10, 37/8-37/10 and 38/8-38/10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristy (US Patent 5,218,455) in view of Quinion (US Patent 5,978,559), Yagi (US Patent 6,393,206 B1), Manico (US Patent 5,764,870), and Bellucco (US Patent 5,930,465).

Regarding claim 8: Kristy in view of Quinion, Yagi and Manico does not disclose expressly that the step of generating a print index file includes sending the print index file to a print queue; and that the step of sending the print index file to the printer includes retrieving a next print index file from the print queue.

Bellucco discloses sending a print file (column 4, lines 23-25 of Bellucco) to a print queue (column 4, lines 46-50 of Bellucco); and retrieving the next print file from the print queue (column 8, lines 11-17 of Bellucco).

Kristy in view of Quinion, Yagi and Manico is combinable with Bellucco because they are from the same field of endeavor, namely image processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to send and retrieve files to be printed using a print queue, as taught by Bellucco, said print file being the print index file taught by Manico. The motivation for doing so would have been to be able to process print jobs from many clients (column 2, lines 44-46 of Bellucco). Therefore, it would have been obvious to combine Bellucco with Kristy in view of Quinion, Yagi and Manico to obtain the invention as specified in claim 8.

Further regarding claim 9: Bellucco discloses that the print queue is represented by a print queue file (figure 7 and column 5, lines 43-45 of Bellucco).

Regarding claim 10: Kristy in view of Quinion, Yagi and Manico does not disclose expressly that the print index file is sent to the printer regardless of whether the record image corresponding to the plurality of digital images represented in the print index file has been transmitted to the medium in the writing step.

Bellucco discloses that a job ticket is processed (column 8, lines 52-54 of Bellucco). Then, the corresponding print job is either saved in a print ready format (column 8, lines 55-61 of Bellucco) or not saved (column 8, lines 66-67 of Bellucco). This is shown graphically in figure 10 of Bellucco. After the job ticket is processed (figure 10(132) of Bellucco) it is either saved (figure 10(134→136) of Bellucco) or not saved, wherein the processing returns to querying the remote server (figure 10(134→116) of Bellucco).

Kristy in view of Quinion, Yagi and Manico is combinable with Bellucco because they are from the same field of endeavor, namely image processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to be able to select to either save the print file or not save the print file, as taught by Bellucco, said print file being the print index file taught by Manico. Therefore, the print index file would be sent to the printer regardless of whether the record image corresponding to the plurality of digital images represented in the print index file has been written to the medium in the writing step. The motivation for doing so would have been to permit client rights to be obtained for saving the print job on a server (column 7, lines 33-35 of Bellucco). Therefore, it would have been obvious to combine Bellucco with Kristy in view of Quinion, Yagi and Manico to obtain the invention as specified in claim 10.

Regarding claims 36/8-36/10, 37/8-37/10 and 38/8-38/10: Kristy discloses performing all of the processing steps with a host computer (figure(14); column 3, lines 1-3 and lines 25-28; and column 4, lines 2-5 and lines 62-65 of Kristy), which would therefore include the computer-executable process steps stored on a computer-readable medium, wherein said process steps are executed with a processor, since this is the manner in which digital computers operate.

8. Claims 11-14, 36/11-36/14, 37/11-37/14 and 38/11-38/14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristy (US Patent 5,218,455) in view of Quinion (US Patent 5,978,559), Yagi (US Patent 6,393,206 B1) and Fukushima (US Patent 6,289,416 B1).

Regarding claim 11: Kristy in view of Quinion and Yagi does not disclose expressly generating a write status indicator which is used to indicate a success in the event that the record image is successfully written to the medium, and which is used to indicate an error in the event that the record image is not successfully written to the medium.

Fukushima discloses generating a write status indicator which is used to indicate a success in the event that a digital data file is successfully written to the medium (column 8, lines 25-30 of Fukushima), and which is used to indicate an error in the event that the digital data file is not successfully written to the medium (column 8, lines 46-51 of Fukushima).

Kristy in view of Quinion and Yagi is combinable with Fukushima because they are from similar problem solving areas, namely successfully storing digital data on a medium. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use an indicator to indicate whether or not a digital data file is successfully written, as taught by Fukushima, said digital data file being the record image taught by Kristy. The motivation for doing so would have been to be able to recover from data write errors (column 3, lines 3-10 of Fukushima). Therefore, it would have been obvious to combine Fukushima with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 11.

Further regarding claim 12: Fukushima discloses that the writing step is repeated for the same digital data file if the write status indicator indicates an error (column 8, lines 46-51 of Fukushima) and is therefore not repeated for a new digital data file.

Further regarding claim 13: Fukushima discloses that the writing step is repeated for the same digital data file if the write status indicator indicates an error (column 8, lines 46-51 of Fukushima).

Further regarding claim 14: Fukushima discloses that the digital data file is compared to the medium at the end of the writing step (column 7, lines 37-43 of Fukushima) to determine if the digital data file is successfully written to the medium (column 8, lines 11-14 of Fukushima).

Regarding claims 36/11-36/14, 37/11-37/14 and 38/11-38/14: Kristy discloses performing all of the processing steps with a host computer (figure(14); column 3, lines 1-3 and lines 25-28; and column 4, lines 2-5 and lines 62-65 of Kristy), which would therefore include the computer-executable process steps stored on a computer-readable medium, wherein said process steps are executed with a processor, since this is the manner in which digital computers operate.

9. Claim 15, 36/15, 37/15 and 38/15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristy (US Patent 5,218,455) in view of Quinion (US Patent 5,978,559), Yagi (US Patent 6,393,206 B1) and Yanagisawa (US Patent 6,421,782 B1).

Regarding claim 15: Kristy in view of Quinion and Yagi does not disclose expressly that the first high-speed image data interface bus is a SCSI interface and the second high-speed image data interface bus is an IDE interface.

Yanagisawa discloses using a SCSI interface to connect a scanner to a computer (column 13, lines 22-24 of Yanagisawa) and an IDE interface to connect a CD-ROM drive to a computer (figure 1(26) and column 10, lines 26-35 of Yanagisawa).

Kristy in view of Quinion and Yagi is combinable with Yanagisawa because they are from similar problem solving areas, namely digital data processing and control. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a SCSI interface for the first high-speed image data interface bus, and thus connected the scanner, and an IDE interface for the second high-speed image data interface bus, and thus connect the image-recorder. The motivation for doing so would have been that devices requiring relatively fast data transfer, such as scanners, need to be connected using a SCSI interface bus (column 13, lines 15-19 of Yanagisawa). Therefore, it would have been obvious to combine Yanagisawa with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 15.

Regarding claims 36/15, 37/15 and 38/15: Kristy discloses performing all of the processing steps with a host computer (figure(14); column 3, lines 1-3 and lines 25-28; and column 4, lines 2-5 and lines 62-65 of Kristy), which would therefore include the computer-executable process steps stored on a computer-readable medium, wherein said process steps are executed with a processor, since this is the manner in which digital computers operate.

10. Claims 18-20, 36/18-36/20, 37/18-37/20 and 38/18-38/20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristy (US Patent 5,218,455) in view of Quinion (US Patent 5,978,559), Yagi (US Patent 6,393,206 B1) and Bouton (*Inside Adobe® Photoshop® 5*, by Gary David Bouton and Barbara Bouton, copyright 1998, New Riders Publishing).

Regarding claim 18: Kristy in view of Quinion and Yagi does not disclose expressly that the adjustment includes rotating.

Bouton discloses editing an image by rotating (page 555, lines 4-9 of Bouton).

Kristy in view of Quinion and Yagi is combinable with Bouton because they are from the same field of endeavor, namely digital data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to adjust the image by rotating. The motivation for doing so would have been to correct for tilt in an image (page 555, lines 1-2 of Bouton). Therefore, it would have been obvious to combine Bouton with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 18.

Regarding claim 19: Kristy in view of Quinion and Yagi does not disclose expressly that the adjustment includes a contrast adjustment.

Bouton discloses editing an image by a contrast adjustment (page 394, line 10 to page 395, line 4 of Bouton).

Kristy in view of Quinion and Yagi is combinable with Bouton because they are from the same field of endeavor, namely digital data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to adjust the image by a contrast adjustment. The motivation for doing so would have been to remove fuzziness in an image (page 394, lines 5-7 of Bouton). Therefore, it would have been obvious to combine Bouton with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 19.

Regarding claim 20: Kristy in view of Quinion and Yagi does not disclose expressly that the adjustment includes a sharpness adjustment.

Bouton discloses editing an image by a sharpness adjustment (figure 13.15 and page 395, lines 1-8 of Bouton).

Kristy in view of Quinion and Yagi is combinable with Bouton because they are from the same field of endeavor, namely digital data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to adjust the image by a contrast adjustment. The motivation for doing so would have been to remove fuzziness in an image (page 394, lines 5-7 of

Bouton). Therefore, it would have been obvious to combine Bouton with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 20.

Regarding claims 36/18-36/20, 37/18-37/20 and 38/18-38/20: Kristy discloses performing all of the processing steps with a host computer (figure(14); column 3, lines 1-3 and lines 25-28; and column 4, lines 2-5 and lines 62-65 of Kristy), which would therefore include the computer-executable process steps stored on a computer-readable medium, wherein said process steps are executed with a processor, since this is the manner in which digital computers operate.

11. Claims 23, 28, 36/23, 36/28, 37/23, 37/28, 38/23 and 38/28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristy (US Patent 5,218,455) in view of Quinion (US Patent 5,978,559), Yagi (US Patent 6,393,206 B1) and well-known prior art.

Regarding claim 23: Kristy discloses that the thumbnail representation of each of the selected digital images is displayed (column 4, lines 42-46 of Kristy) on a monitor (figure 1(16) and column 5, lines 16-17 of Kristy) connected to the computer (column 3, lines 28-32 of Kristy). Each digital image is adjusted based on a menu-driven user selection (column 5, lines 29-31 of Kristy).

Kristy in view of Quinion and Yagi does not disclose expressly that each selected digital image is adjusted by a pointing device connected to the computer.

However, a pointing device used for choosing selections and adjustments, such as a mouse, connected to a computer is old, well-known and expected in the art, and has been considered admitted by Applicant (see page 5, lines 13-18 of the Office action dated 02 September 2005 and mailed 13 September 2005). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a pointing device connected to a computer to adjust the digital image since a pointing device is a common and convenient means to input data into a computer.

Regarding claim 28: Kristy in view of Quinion and Yagi does not disclose expressly that the medium is a digital tape.

However, a digital tape to store digital data is old, well-known and expected in the art, and has been considered admitted by Applicant (see page 5, lines 13-18 of the Office action dated 02 September 2005 and mailed 13 September 2005). It would have been obvious to one of ordinary skill in the art at the time of the invention to write the record image onto a digital tape since a digital tape is a common and convenient means to store and later re-access digital data.

Regarding claims 36/23, 36/28, 37/23, 37/28, 38/23 and 38/28: Kristy discloses performing all of the processing steps with a host computer (figure(14); column 3, lines 1-3 and lines 25-28; and column 4, lines 2-5 and lines 62-65 of Kristy), which would therefore include the computer-executable process steps stored on a computer-readable medium, wherein said process steps are executed with a processor, since this is the manner in which digital computers operate.

12. Claims 24, 36/24, 37/24 and 38/24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristy (US Patent 5,218,455) in view of Quinion (US Patent 5,978,559), Yagi (US Patent 6,393,206 B1) and Hoyt (US Patent 6,085,195).

Regarding claim 24: Kristy in view of Quinion and Yagi does not disclose expressly that the scanning step and processing step are performed in a second computer which is connected to the dedicated computer via a network, and the writing step is performed in the dedicated computer.

Hoyt discloses a second computer (remote kiosk) (figure 3 (126) of Hoyt) which performs the steps of scanning (column 8, lines 14-17 of Hoyt) and processing (column 8, lines 27-30 of Hoyt) and is connected to a dedicated computer (web server) via a network (column 9, lines 5-6 and lines 16-18 of Hoyt); and the writing step is performed in said dedicated computer (column 9, lines 3-10 of Hoyt).

Kristy in view of Quinion and Yagi is combinable with Hoyt because they are from the same field of endeavor, namely digital data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to scan and process the image on a second, remote computer and write the data onto the dedicated computer. The motivation for doing so would have been to be able to store the image data on a central server, such as a web server (column 9, lines 8-12 of Hoyt), and thus be able to access the image data remotely. Therefore, it would have been obvious to combine Hoyt with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 24.

Regarding claims 36/24, 37/24 and 38/24: Kristy discloses performing all of the processing steps with a host computer (figure(14); column 3, lines 1-3 and lines 25-28; and column 4, lines 2-5 and lines 62-65 of Kristy), which would therefore include the computer-executable process steps stored on a computer-readable medium, wherein said process steps are executed with a processor, since this is the manner in which digital computers operate.

13. Claims 25, 36/25, 37/25 and 38/25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristy (US Patent 5,218,455) in view of Quinion (US Patent 5,978,559), Yagi (US Patent 6,393,206 B1), and Doerr (US Patent 5,949,411).

Regarding claim 25: Kristy in view of Quinion and Yagi does not disclose expressly that a second computer is connected to the dedicated computer, and wherein the scanning step and the processing step are performed in the dedicated computer and the writing step is performed in the second computer.

Doerr discloses a second computer (figure 2(K-1) of Doerr) that is connected to the dedicated (host) computer (figure 2(11) of Doerr) (column 4, line 65 to column 5, line 4 of Doerr). The scanning step (column 6, lines 11-16 of Doerr) and processing step are performed in the dedicated computer (column 6, lines 16-21 of Doerr). The writing step is performed in the second computer (column 6, lines 22-30 of Doerr).

Kristy in view of Quinion and Yagi is combinable with Doerr because they are from the same field of endeavor, namely digital data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to scan and process the image data on the dedicated computer and write the image data on the second computer. The motivation for doing so would have been to be able to provide image data from a centralized database (column 6, lines 22-26 of Doerr). Therefore, it would have been obvious to combine Doerr with Kristy in view of Quinion and Yagi to obtain the invention as specified in claim 25.

Regarding claims 36/25, 37/25 and 38/25: Kristy discloses performing all of the processing steps with a host computer (figure(14); column 3, lines 1-3 and lines 25-28; and column 4, lines 2-5 and lines 62-65 of Kristy), which would therefore include the computer-executable process steps stored on a computer-readable medium, wherein said process steps are executed with a processor, since this is the manner in which digital computers operate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES A. THOMPSON whose telephone number is (571)272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A Thompson/
Examiner, Art Unit 2625

25 March 2008